

# Carrots

**1. Name three specific functions that vitamin A provides for the body.**

Primary-level response:

Carrots provide an excellent source of vitamin A. Vitamin A is important for our eyes, skin, and a healthy immune system.

Secondary-level response:

Carrots provide an excellent source of vitamin A, which can be made into retinol in the body. Retinol is required for proper eye function. The majority of vitamin A is stored in the liver. Vitamin A also helps keep our skin and immune system healthy.

**2. What are some of the signs of vitamin A deficiency?**

Primary-level response:

Since vitamin A helps keep our skin healthy, a lack of vitamin A can result in skin rashes. Vitamin A also helps us see in the dark by preventing night blindness, so a deficiency could impact our ability to see well when it is dark.

Secondary-level response:

Vitamin A deficiencies result due to lack of dietary intake, inability to properly absorb fat, or from liver disorders. We need vitamin A to keep our skin healthy so a deficiency will result in rashes on our skin. Low levels of vitamin A also impact the retina of the eye resulting in night blindness. To treat deficiencies, vitamin A can be taken orally or, if deficiency is a result of malabsorption problems, it is given parentally (via injections or intravenously).

**3. The percent Daily Value (%DV) tells you how much of a nutrient you get in a serving of a food item and is based on a 2,000-calorie diet. Vitamin A is measured in International Units (IU). Look up the IU for vitamin A that your body needs based on your gender and age. Compile a list of foods you eat and find the %DV for vitamin A in these foods. Determine if you are getting an adequate amount of vitamin A in your diet.**

Primary/Secondary-level response:

There are two values used to report nutrient amounts on labels: Daily Reference Values (DRVs) and Reference Daily Intakes (RDI). To avoid confusing consumers, labels use percent Daily Values (%DV). The %DV for vitamin A is based on 5,000 International Units (IU). To calculate this, you must divide the amount of vitamin A in the serving of food by the recommended %DV.

The *2010 Dietary Guidelines for Americans* recommend the following amounts for various age groups and gender groups:

Female, 4-8	Male, 4-8	Female, 9-13	Male, 9-13	Female, 14-18	Male, 14-18
400 mcg or 1,333 IU	400 mcg or 1,333 IU	600 mcg or 2000 IU	600 mcg or 2,000 IU	700 mcg or 2,333 IU	900 mcg or 3000 IU

**4. Map the different commercial carrot-packing regions in the world.**

Primary/Secondary-level response:

[Student maps will vary. About 80% of the nation's fresh carrots are grown year-round in California. Kern County produces and ships the largest volume of carrots. There are four main carrot-producing regions in California: the Southern San Joaquin Valley/Cuyama Valley, the Southern Desert, the Central Coast, and the High Desert.]

**5. Identify and compare the peak harvest times for carrots in each California region.**

Primary/Secondary-level response:

<b>Location:</b>	<b>San Joaquin Valley</b>
Planting Period:	December-March; July-September
Harvest Period:	May-July; November-February

<b>Location:</b>	<b>Low desert</b>
Planting Period:	September-November
Harvest Period:	March-May

<b>Location:</b>	<b>High desert</b>
Planting Period:	March-July
Harvest Period:	July-November

<b>Location:</b>	<b>Central coast</b>
Planting Period:	December-August
Harvest Period:	April-January

Sources:

[www.fruitsandveggiesmatter.gov/month/carrot.html](http://www.fruitsandveggiesmatter.gov/month/carrot.html)  
[www.ipmcenters.org/cropprofiles/docs/cacarrots.html](http://www.ipmcenters.org/cropprofiles/docs/cacarrots.html)  
<http://ohioline.osu.edu/hyg-fact/5000/5551.html>  
<http://lpi.oregonstate.edu/infocenter/vitamins/vitaminA/>

Updated: April 2011